

THAT WHICH IS CLAIMED:

1. A Nucleic acid molecule encoding an engineered protein having altered amino acid composition, wherein said amino acid composition has been altered by introducing amino acid changes into said protein, wherein said engineered protein binds to an interacting molecule capable of binding with a corresponding native protein.
2. The nucleotide sequence of claim 1, wherein said amino acid changes increase the levels of at least one essential amino acid in the protein.
3. The nucleotide sequence encoding of claim 2 wherein said essential amino acid is selected from the group consisting of methionine, tryptophan, lysine, valine, phenylalanine, isoleucine, leucine, threonine and cysteine.
4. The nucleotide sequence of claim 1, wherein said is vegetative storage protein.
5. A transformed plant containing within its genome the nucleotide sequence of Claim 2.
6. A transformed plant containing within its genome the nucleotide sequence of Claim 3.
7. A transformed plant containing within its genome the nucleotide sequence of Claim 4.
8. A stably transformed plant having inserted into its genome a chimeric gene said gene encoding an engineered protein having altered amino acid composition wherein said protein, wherein said engineered protein binds to an interacting molecule which binds with a corresponding native protein.

9. The plant of Claim 8, wherein said amino acid changes increase the levels of at least one essential amino acid in the protein.

10. The plant of Claim 9, wherein said essential amino acid is selected from the group consisting of methionine, tryptophan, lysine, valine, phenylalanine, isoleucine, leucine, threonine and cysteine.

11. The plant of Claim 10, wherein said essential amino acid is increased to represent 5% of the total amino acid content of the protein.

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12. The plant of Claim 10, wherein said essential amino acid are increased to represent 10% of the total amino acid content of the protein.

13. The plant of claim 12, wherein said protein is vegetative storage protein.

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14. The plant of Claim 8, wherein said plant is a dicot.

15. The plant of Claim 8, wherein said plant is a monocot.

20 16. The plant of Claim 15, wherein said monocot is maize.

17. The plant of Claim 15, wherein said dicot is soybean.

18. Seed of the plant of Claim 8.

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19. Seed of the plant of Claim 15.

20. Seed of the plant of Claim 16.

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